



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,022	12/11/2003	M. Dalil Rahman	2003US312	2346

7590

11/10/2005

Sangya Jain
Clariant Corporation
70 Meister Avenue
Somerville, NJ 08876

EXAMINER

CHU, JOHN S Y

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,022

Applicant(s)

RAHMAN, M. DALIL

Examiner

John S. Chu

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 8-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/22/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the amendment filed August 19, 2005.

1. The rejection under 35 U.S.C. 112, second paragraph as given in previous Office action paragraphs 2 and 3 is **withdrawn** in view of the amendment canceling claim 2 and amending claim 12 to depend from claim 11.
2. The rejection under 35 U.S.C. 102(e) as being anticipated by NISHI et al (6,531,627); the rejection as anticipated by NISHIYAMA (2004/0063827); the rejection as anticipated by NISHIMURA et al is **withdrawn** in view of the amendment to claim 1 which alters variable A to be noncyclic polymer backbone.
3. The rejection under 35 U.S.C. 103 as unpatentable over NISHI et al further in view of NISHIMURA et al is **withdrawn** in view of the amendment to claim 1; the rejection as unpatentable over NISHIMURA et al further in view of NISHIYAMA et al is **withdrawn** in view of the amendment to claim 1.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1 and 8-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term alkyl group defined for W is a misnomer and unclear based on the group being a divalent group. The term alkyl defines a radical which is an end group, however clearly W is intended to be an divalent bridging groups known as an alkylene.

Art Unit: 1752

Correction is necessary.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

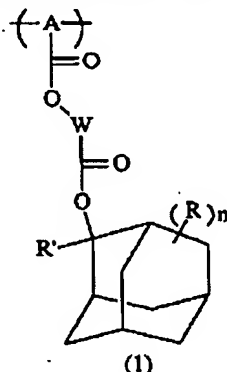
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 8-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over NISHIYAMA et al (2004/0063827).

The claimed invention is now drawn to the following:

Art Unit: 1752

1. (currently amended) A photoresist composition comprising a photoacid generator and a polymer comprising at least one unit as described by structure 1,



where, A is a unit derived from an aliphatic unsaturated moiety has the structure



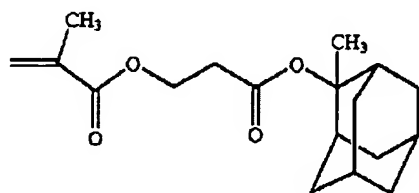
where R_1' , R_1'' and R_1''' are independently hydrogen, (C₁-C₈) alkyl or cyano, and Y is X, C(O)OX, OX, where X is an aliphatic (C₁-C₆) alkylene group, and m is 0 or 1.

W is a nonaromatic linking (C₁-C₈) linear or branched alkyl group.

R is independently selected from substituted hydrocarbyl group, unsubstituted hydrocarbyl group, hydrogen, hydroxyl, and (C₁-C₁₀)alkyl,

R' is hydrogen or (C₁-C₆) alkyl, and n=1-9.

NISHIYAMA et al teaches a positive resist composition wherein the resin used in the composition discloses and suggests a monomeric group defined as the following:



Ia-25

. This structure teaches the claimed monomeric unit as described in claim 1, see subparagraph [00079].

NISHIYAMA et al lacks a working example using the claimed monomeric group in a copolymer.

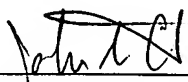
It would have been *prima facie* obvious to one of ordinary skill in the art of photoresist composition to use the monomeric group of Ia-25 in place of the monomeric group in resin 1 found on page 48 with the reasonable expectation of same or similar results with respect to excellent line edge roughness and pattern collapse performance.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

The fax phone number for the USPTO is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John S. Chu
Primary Examiner, Group 1700

J.Chu
October 31, 2005